

A REVIEW OF THE TRACHYLOEINI OF AMERICA NORTH OF MEXICO (COLEOPTERA, CURCULIONIDAE)

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This paper is the result of a study started originally on the genus *Cercopeus* Schönherr. However, to establish the proper relationship of the related genera it became necessary to review all the genera and species in the tribe. The author hopes that this review will enable other workers to determine their material in this group which heretofore has been rather neglected. The author feels that further study should be made in Western United States for more members of this tribe.

DISCUSSION

The tribe Trachyploeini is typified by the absence of ocular lobes, the eyes always free and rounded; the scrobes are variable, never at the same time linear and directed beneath; the outer segments of funicle moniliform; elytra scarcely surpassing the width of the prothorax at base; humeral angles rounded; metasternum short; the intercoxal lobe on the first abdominal segment large and broad; the corbels of the posterior tibiae open and the tarsal claws free.

All members of this tribe known to science are apterous. The larvae of all species breed in the roots of herbaceous plants and trees. They are potentially of economic importance, particularly in areas which have been recently cleared for cultivation of agricultural crops.

Occasionally the adults will be found feeding on foliage during the day, but with few exceptions they are night feeders, spending the day in leaf litter and rubbish around the host plant.

All of the species probably over-winter as an imago. The author has found sifting during the winter to be the most successful method of obtaining examples in Eastern United States, particularly those members of the genus *Cercopeus* Schönherr.

Males are very rare in this tribe. More than 500 weevils belonging to this tribe were examined and of this number only 2 were males. For this reason all descriptions, with the exception of *Pseudocercopeus setosus* n. gen. and n. sp., were drawn from the female. The description was not taken from the female of the afore mentioned because most of the appendages were lacking.

The type of *Cercopeus chrysorrhoeus* (Say) has been lost. A neoholotype has been designated. There might be some doubt as to which species of *Cercopeus* Say had. So far as the author is able to ascertain there are only two species of *Cercopeus* occurring in Pennsylvania, the type locality of *chrysorrhoeus*. They are the species I have designated as *chrysorrhoeus* and *maspavancus* n. sp. The first fits the original description very well in size, color pattern and general form, while *maspavancus* is much larger and differs from the original description in many ways. Also, though irrelevant, the one designated as *chrysorrhoeus* is the one most commonly accepted as that in collections.

The following key is based upon morphological characters only, while the treatment of the genera is in a phylogenetic order.

KEY TO THE TRACHYPHLOEINI.

1. Nasal plate large, smooth, triangular, limited by an abrupt ridge..... 2
- 1'. Nasal plate very small or not visible, no limiting ridge present..... 4
2. Metathoracic episterna visible; suture at least moderately visible..... 1. *Trachypphloeus* Germar
- 2'. Metathoracic episterna concealed, no suture apparent; the eyes with a distinct orbital groove..... 3
3. Scrobes lateral, long, passing directly backward and enclosing the eyes; all tibiae strongly mucronate..... 2. *Chaetechnus* Horn
- 3'. Scrobes superior, very short and deep, not reaching the eyes; only anterior and middle tibiae mucronate..... 4. *Cercopaeus* Schönherr
4. Scrobes lateral, long, passing backward and below the lower angle of the eyes; all tibiae feebly mucronate..... 3. *Chaetechnidius* n. gen.
- 4'. Scrobes superior, very short, and deep, not reaching the eyes; only anterior and middle tibiae mucronate at apex..... 5
5. Rostrum short and broad, prementum not emarginate on apical margin; only the labial palps visible, (fig. 15)..... 5. *Pseudocercopaeus* n. gen.
- 5'. Rostrum longer, narrow, almost cylindrical, prementum broadly emarginate; both labial and maxillary palps visible, (fig. 12)..... 6. *Cercopedius* n. gen.

1. *Trachypphloeus* Germar

Trachypphloeus Germar 1817, p. 339. LeConte and Horne 1876, p. 78. Blatchley & Leng 1916, p. 114.

Rostrum as long as the head, stout, subquadrangular, nearly straight, transversely sulcate at base; apex with a prominent triangular nasal plate and limiting ridge. Scrobes lateral, deep, moderately arcuate and passing directly backward to the eye. Antennal scape nearly or attaining the apical margin of the prothorax; funicle 7-segmented, first segment elongate and robust, second segment slender longer than third, segment 3-7 short, 5-7 moniliform; club oval. Eyes small, rounded, lateral, coarsely granulated and with a distinct orbital groove. Prothorax transverse, much wider than long; ocular lobes absent. Scutellum not visible. Elytra oval. Ventral side with the metathoracic episterna present, moderate; the suture distinct throughout its entire length. Metasternum short. Intercostal lobe of first abdominal segment broad, truncate; second segment not as long as 3 and 4 united; first abdominal suture nearly straight. All tibiae usually mucronate (middle tibiae not mucronate in *davisi*); armed with several tooth-like spines at the apices. Claws free and divergent.

Genotype. *Curculio scabriculus* Linnaeus by monotypy.

KEY TO THE SPECIES OF *Trachypphloeus*.

1. Anterior tibiae with 3 or 4 distinct, and 2 or more shorter spines at the apex..... *bifoveolatus* (Beck)
- 1'. Anterior tibiae with only 2 spines at the apex..... *davisi* Blatchley

Trachypphloeus bifoveolatus (Beck)

Curculio bifoveolatus Beck 1817, p. 22.

Trachypphloeus bifoveolatus (Beck), Bedel 1883, p. 41. Buchanan 1937, p. 312. Brown 1940, p. 77; 1950, p. 202.

Trachypphloeus asperatus of Horn (nec Boheman) 1876, p. 79.

Oblong-oval, robust; reddish brown to black; densely clothed with a clay-like coating of silver-gray scales; the prothorax with a few scattered recurved clavate scales, the elytra with similar but larger scales in a single row on each interval.

Rostrum robust, slightly shorter than the prothorax, with a deep median groove and a deep transverse depression at the base. Antennal scape nearly reaching anterior margin of the prothorax. Head rounded. Eyes elliptical, very feebly convex.

Prothorax three-fifths wider than long, the sides strongly rounded in the basal two-thirds, then strongly constricted to the apex; pronotum with a longitudinal groove and lateral foveae which are frequently obscured by the crust. Scutellum not visible.

Elytra oblong-oval, about one-fourth longer than broad, the sides rounded to apex; striae not impressed, stria punctures large, round and deep; intervals flat; sculpture of elytra usually completely obscured by the crust.

Ventral side with the sculpture completely obscured by the crust. Anterior tibiae straight; with 3-4 larger and two or more shorter spines at the apex. All tibiae mucronate. Claws free and divergent.

Length 3.4-3.7 mm., width 2.0-2.3 mm.

Type locality Europe.

Distribution. Europe, Canary Islands, Nova Scotia to British Columbia, south to New York and Oregon.

Material examined. Numerous examples from localities in Maine, Nova Scotia, New York, Oregon and British Columbia. In all, 350 examples were studied, all were female. The Maine examples were under rocks in open meadows, while those from Oregon (Portland), were migrating across sidewalks and streets in October.

This species can be separated from *davisi* by the characters mentioned in the key.

Trachyploeus davisi Blatchley

Trachyploeus davisi Blatchley, Blatchley & Leng 1916, p. 115.

Oblong-oval, robust; black, with the antennae and legs dull reddish brown; densely clothed with dark brown and silver gray scales, the latter in a broad median line and lateral stripes each side of the pronotum and covering the even elytral intervals, forming oblong spots on the third, fifth and seventh intervals, and with scattered clavate erect, feebly recurved scales which are also in a single line on each elytral interval.

Rostrum robust, slightly shorter than the prothorax and with a distinct median groove. Antennal scape attaining anterior margin of the prothorax. Head convex. Eyes elliptical, coarsely granulated and feebly convex.

Prothorax almost twice as wide as long, the sides strongly rounded; pronotum without a median impressed line; the sculpture completely concealed by the crust. Scutellum not visible.

Elytra oblong-oval, the sides feebly divergent to the apical third, then broadly rounded to apex; striae fine, indistinctly punctured; intervals flat.

Ventral side with sculpture completely obscured. Anterior tibiae straight, expanded at apex, and with two spines. Claws free and divergent.

Length 3.5-3.8 mm., width 2.1-2.4 mm.

Type locality. Ft. Wadsworth, Staten Island, New York.

Distribution. Known only from Staten Island and Long Island.

Material examined. Holotype, ♀, Ft. Wadsworth, Staten Island, N. Y., IV-27-11, W. T. Davis in the Blatchley Collection at Purdue University. Other examples without definite data other than a "Long Island" locality label. All examples were ♀.

This species may be separated from *bifoveolatus* (Beck) by the characters mentioned in the key.

2. Chaetechus Horn

Chaetechus Horn 1876, p. 77. Blatchley & Leng 1916, p. 113.

Rostrum stout, quadrangular, the sides subparallel, nearly as long as the head; the nasal plate smooth, triangular, limited by a prominent ridge. Scrobes lateral, deep, passing backward and surrounding the eyes. Antennae stout; scape robust, feebly arcuate, attaining apical margin of the prothorax. Funicle 7-segmented, the first two segments elongate, the first very robust; 3-7 moniliform; club oval. Eyes small, with round and a distinct orbital groove. Prothorax transverse. Scutellum very minute. Elytra oblong-oval, the sides subparallel at middle. Ventral side with the second abdominal segment longer than either the third or fourth. First abdominal suture feebly arcuate. Inter-coxal lobe of first abdominal segment very broad and short. All tibiae mucronate at apex. Claws free and divergent.

Genotype. *Chaetechus setiger* Horn which is a synonym of *Trachyploeus asperatus* Boheman.

Chaetechus asperatus (Boheman)

Trachyploeus asperatus Boheman 1844, p. 116.

Chaetechus setiger Horn 1876, p. 78. Blatchley & Leng 1916, p. 114. Blackwelder 1948, p. 46.

Chaetechus asperatus (Boheman), Blackwelder 1948, p. 46.

Oval, convex; reddish brown; covered with a crust of gray scales and a clay-like substance, and suberect, slightly recurved, clavate scales, the latter in a single row on each elytral interval.

Rostrum short and broad, little more than half as long as prothorax, the sides subparallel; densely punctured and with an indistinct median line, the sculpture frequently concealed by the clay-like coating. Eyes round and strongly convex.

Prothorax one-fourth wider than long, the sides divergent to apical third, then constricted to the apex; pronotum moderately convex, densely punctured, a slight post-apical and short transverse impression slightly behind the middle; sculpture obscured by the crust; surface with the clavate scales rather sparse. Scutellum very minute.

Elytra oval, three-fourths as wide as long, the sides parallel behind humeri apical third, then convergent to the apex; striae feebly impressed, strial punctures round, very deep; intervals flat, very minutely punctured; sculpture of surface concealed by the crust.

Ventral side with a few erect setae and coarsely, but not densely punctured. The legs clothed with clavate scales. Femora unarmed. Anterior tibiae slightly curved. All tibiae mucronate at apex.

Length 2.3–2.6 mm. width 1.2–1.4 mm.

Type locality. Of *asperatus* Boheman "America borealis ad Boston", of *setiger* Horn "Massachusetts".

Distribution. Maine, New Hampshire, and Massachusetts.

Material examined. Maine: Harrington, VI–II–34, in the author's collection and the United States National Museum. Examples also were studied from New Hampshire and Massachusetts without precise locality. Thirty-five examples were studied, all were female.

3. *Chaetechidius* n. gen.

Rostrum stout, quadrangular, the sides subparallel, shorter than the head, the nasal plate and limiting ridge absent. Scrobes lateral, long, passing backwards and beneath the lower angle of the eyes. Antennal scape slender, arcuate and attaining the apical margin of the prothorax. Funicle 7-segmented, the first sement very elongate and robust, the second elongate and slender, 3–7 moniliform; club ovate. Eyes small, round, and surrounded by a deep orbital groove. Prothorax transverse, much wider than long; ocular lobes absent. Scutellum not visible. Elytra oval, the sides rounded. Metaepisterna concealed. Intercostal lobe on the first abdominal segment broad and truncated. Second abdominal segment longer than the third and fourth combined. First abdominal suture straight. Femora unarmed. All tibiae feebly mucronate. Claws free and divergent.

Genotype. *Chaetechidius speciosus* n. sp.

The genotype resembles a *Chaetechus* but may be readily separated by the absence of a nasal plate and limiting ridge, and the more rounded elytra.

Chaetechidius speciosus n. sp.

Female. Oval, convex; black, with the antennae, tarsi and 3–5 abdominal segments reddish brown; densely clothed with very delicate, overlapping, white radiate-pectinate scales and scattered erect, rod-like setae which on the elytra are in a single line on each interval.

Rostrum short, broad, almost three-fifths as long as the prothorax; very densely rugosely punctured and with a shallow median groove from the base to antennal insertion; head and rostrum continuous, not separated by a transverse groove. First segment of funicle elongate and very robust, the second segment elongate and about one-half as long as first, 3–7 moniliform. Club oval, densely pubescent. Eyes small, round and very strongly convex.

Prothorax more than one-half wider than long, the sides rounded from base to apex; pronotum convex, densely, coarsely, deeply punctured. Scutellum not visible.

Elytra oval, one-fifth wider than long, the sides rounded from base to apex; striae unimpressed, strial punctures round, deep and closeset; intervals flat sparsely, finely punctured.

Ventral side very sparsely clothed with semierect narrow scales. The thoracic sterna and the first abdominal segment rugosely, rather coarsely punctured, the remaining segments very sparsely and finely punctured. Anterior tibiae straight, the apex with numerous long, slender, sharp spines. All tibiae feebly mucronate.

Length 2.4 mm., width 1.5 mm.

Male. Unknown.

Type locality. Colorado Springs, Colorado.

Distribution. Known only from Colorado Springs, and Greely, Colorado.

Type material. Holotype, ♀, Colorado Springs, Colorado, X-10, in the author's collection. Other examples have been seen from Colorado Springs and Greely, Colorado. All were female. The holotype was found under a rock in a grassy area.

This species resembles, superficially, *Chaetechus asperatus* (Boheman), but differs in being more oval, with the sides of the elytra more rounded, in the absence of the nasal plate and limiting ridge and the erect, rod-like, instead of clavate, setae.

4. *Cercopeus* Schönherr

Cercopeus Schönherr 1843, p. 154. Lacordaire 1863, p. 192. Seidlitz 1865, p. 277. Pierce 1913, p. 422. Blatchley & Leng 1916 p. 109.

Cercopius Gemminger & Harold 1871, p. 2287. (emend.)

Cerpocous Lacordaire 1863, p. 192. (err.)

Rostrum slightly longer and narrower than the head, feebly curved; nasal plate smooth, triangular, limited by a prominent ridge. Scrobes superior, short, deep, not attaining the eyes. Funicle 7-segmented; the first two segments elongate, the first very robust, the outer segments shorter or moniliform. Eyes small, rounded, with a distinct orbital groove. Ocular lobes absent. Elytra oval, humeral angles rounded, the sides broadly rounded. Metaepisternum concealed, the metasternum short. Intercoxal lobe of first abdominal segment large, broad and truncated. Anterior and middle tibiae feebly mucronate. Hind tibiae usually with two fixed spurs and the corbels open. Tarsal claws free and divergent.

Genotype. *Periletus chrysorrhoeus* Say, by original designation.

KEY TO THE SPECIES OF *Cercopeus*.

1. Prothorax strongly constricted apically (fig. 11); pronotal punctures small, moderately dense, but not confluent; hind tibiae with the spurs very short in the ♂, one of them wanting in the ♀; Texas..... *isquitus* n. sp.
- 1'. Prothorax slightly or but very feebly constricted (fig. 16); pronotal punctures more elongate and at least slightly confluent; hind tibiae with the spurs moderately long..... 2
2. Pronotum with a median longitudinal ridge apically and at middle of base; eyes very convex and prominent; Mich., Ill..... *schwarzii*, n. sp.
- 2'. Pronotum without such modification..... 3
3. Outer apical angle of anterior tibiae sharply produced; spines in distal comb of hind tibiae short; antennae very robust; middle of pronotum with a distinct tumidity; a robust, dark species; Mass., Pa., Va., N. C..... *maspavancus* n. sp.
- 3'. Outer apical angle of anterior tibiae not produced; antennae more slender; variable species 4
4. Disc of pronotum strigose, the individual punctures nearly effaced..... 5
- 4'. Disc of the pronotum with the punctures present (though they may be strongly elongated and in part confluent; middle of pronotum not tumid..... 6
5. Larger 4.5-5.5 mm.; pronotal striae rather fine, not widely separated; outer apical angle with a small spine above apex; darker and with no distinct color pattern; S. C., Ga., Ala..... *strigicollis* n. sp.
- 5'. Smaller, 3.0-3.6 mm.; pronotal striae very coarse, widely separated, outer apical angle without a small spine above apex; with a distinct color pattern; Ark..... *clisus* n. sp.
6. Dorsal edge of rostrum, in profile, concave at middle; a tumidity between antennal insertion and on vertex of head above eyes (fig. 14); apex of rostrum swollen; Va. *simius* n. sp.
- 6'. Not as above..... 7
7. Anterior tibiae with a prominent spine on the outer edge some distance above the apex; eyes elliptical, moderately convex, rostrum thinner; Ohio, N. Y., Pa., N. J., Md., D. C., Va., S. C., Ala., Tex..... *chrysorrhoeus* (Say)
- 7'. Anterior tibiae without such a prominent spine, the spines evenly distributed; eyes rounded, strongly convex; rostrum thicker..... 8
8. Smaller, 2.0-3.0 mm.; prothorax very finely, closely, deeply punctured, the intervals between the punctures raised giving a granular appearance; 8th sternite of ♀ narrowed at apex, truncated (fig. 18); Ill., Ia., Mo., Ark..... *chisaius* n. sp.
- 8'. Larger, 3.0-3.5 mm.; prothorax very coarsely, closely punctured, the surface not granular in appearance; 8th sternite of ♀ broadly rounded at apex, not narrowed (fig. 19); Ohio..... *confusor* n. sp.

***Cercopeus isquitus* n. sp.**

Figures 1 and 11

Female. Oval, strongly convex; reddish brown with the antennae and tarsi slightly paler; densely clothed with pale brown, dark brown and white scales, the white scales condensed laterally on the prothorax, in spots on the humeri, at the base of the 6th interval and in an indefinite oblique white band at declivity; head, prothorax and elytra with erect, slightly recurved setae, those on the elytra in a single row on each interval.

Rostrum short, broad, three-fifths as long as prothorax; nasal plate very prominent, very oblique in relation to the remainder to the dorsal edge; dorsal edge, in profile, feebly convex above the eyes. Head strigose, the punctures confluent. Eyes moderately convex, round and prominent.

Prothorax rectangular, one-fifth wider than long, the sides subparallel at middle, strongly rounded to base and constricted to apex; pronotal punctures small, moderately dense, never confluent. Scutellum very small, nearly invisible, densely clothed with white scales.

Elytra oval, nearly as wide as long, the sides strongly rounded; striae moderately impressed, stria punctures feeble; intervals flat.

Ventral side with the thoracic sternites densely clothed with white scales; the abdominal segments convex; sparsely clothed with fine suberect setae and very sparsely punctured, first abdominal suture straight; the first abdominal segment with a depression at middle of apical margin. Hind tibiae of female with only one fixed spur. Anterior tibiae straight, slightly expanded at outer apical angle.

Length 2.7 mm., width 1.5 mm.

Male. Differs from the female in the presence of two spurs on the hind tibiae instead of one, and abdominal segments 1 and 2 broadly depressed at middle. Length 2.7 mm., width 1.5 mm.

Type locality. Washington Co., Texas.

Distribution. Washington and Walker Counties, Texas.

Type material. Holotype, ♀, Washington Co., Texas in the author's collection, allotype, ♂, and one paratype, ♀, Hempstead, Texas in the United States National Museum.

This species is not closely related to any of the other species. It may be readily separated by the rectangular prothorax, the non-confluent punctures and the shorter, blunt spurs on the hind tibiae. The holotype was found in woodland litter.

***Cercopeus schwarzi* n. sp.**

Figure 2

Female. Elongate, oval, convex; dark reddish brown densely clothed with brown scales and erect, feebly recurved setae, those on the elytra arranged in single rows on each interval, without evident color pattern.

Rostrum short, broad slightly more than one-half as long as prothorax; feebly sulcate at middle, the sulcus nearly obscured by scales; dorsal edge, in profile, convex. Head strigose; with a shallow transverse depression above the eyes. Eyes moderately convex, oval, prominent.

Prothorax slightly wider than long, sides rounded from base to apex; pronotum with a prominent keel in apical third and at middle of base; coarsely, deeply, closely punctured. Scutellum very small, nearly invisible.

Elytra elongate-oval, one-fourth longer than wide, the sides arcuate from base to apex; striae impressed, the stria punctures very feeble; intervals flat or just perceptibly convex.

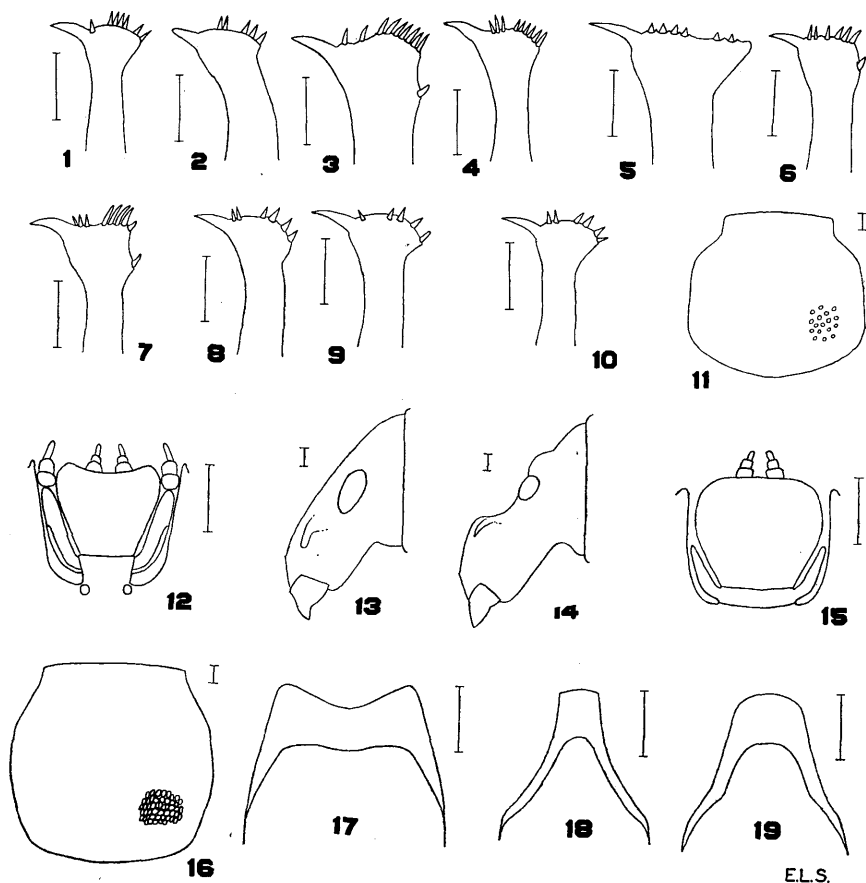
Ventral side with the thoracic sternites densely clothed with scales, the abdominal segments sparsely clothed with brown scales and recumbent setae and a few sparse punctures. First abdominal suture strongly curved. Hind tibiae of ♀ with two fixed spurs. Anterior tibiae strongly curved, the outer apical angle not produced.

Length 3.6-mm., width 1.75 mm.

Male. Unknown.

Type locality. Detroit, Michigan.

Distribution. Michigan and Illinois.



1. Apex of right anterior tibiae of *Cercopeus isquitus* n. sp., ♀.
2. Same of *Cercopeus schwarzi* n. sp., ♀.
3. Same of *Cercopeus strigicollis* n. sp., ♀.
4. Same of *Cercopeus clispus* n. sp., ♀.
5. Same of *Cercopeus maspavancus* n. sp., ♀.
6. Same of *Cercopeus simius* n. sp., ♀.
7. Same of *Cercopeus chrysorrhoeus* (Say), ♀.
8. Same of *Cercopeus chisaius* n. sp., ♀.
9. Same of *Cercopeus confusor* n. sp., ♀.
10. Same of *Cercopedius artemisiae* (Pierce), ♀.
11. Outline of prothorax of *Cercopeus isquitus* n. sp.
12. Prementum of *Cercopedius artemisiae* (Pierce).
13. Profile of rostrum of *Cercopeus chrysorrhoeus* (Say).
14. Same of *Cercopeus simius* n. sp.
15. Prementum of *Pseudocercopeus setosus* n. sp.
16. Outline of prothorax of *Cercopeus chrysorrhoeus* (Say).
17. Eighth sternite of ♀ of *Cercopeus chrysorrhoeus* (Say).
18. Same of *Cercopeus chisaius* n. sp.
19. Same of *Cercopeus confusor* n. sp.

Line represents $\frac{1}{6}$ mm.

Type material. Holotype, ♀, Detroit, Michigan, Hubbard & Schwarz, in the United States National Museum, 3 paratypes: 2 ♀, Detroit, Mich., in the United States National Museum; 1 ♀, same data as the holotype, in the author's collection. Length of paratypes 3.2–3.4 mm., width 1.6–1.8 mm. Examples have also been seen from Chicago, Illinois, but are not included as a part of the type series.

This species differs from *C. chrysorrhoeus* (Say) in the prominent pronotal carinae and absence of any color pattern. From the other species it may be separated by the characters mentioned in the key.

***Cercopeus maspavancus* n. sp.**

Figure 5

Female. Oval, convex; dark reddish brown; densely clothed with light and dark brown scales and recumbent setae; a discal spot of dark scales on the pronotum and on the elytra, the elytra with an oblique band of pale scales from humeri to declivity; the setae arranged in a single row on each elytral interval.

Rostrum short, broad, only one-half as long as the prothorax; dorsal edge, in profile, feebly convex; the nasal plate very prominent and oblique. Antennae very robust. Head closely and coarsely punctured. Eyes convex, oval, not prominent.

Prothorax wider than long, the sides evenly rounded from base to apex; pronotum coarsely, deeply, densely punctured middle of pronotum distinctly tumid. Scutellum not visible.

Elytra oval; sides rounded from base to apical third, then strongly convergent to apex; striae strongly impressed, striae punctures very small; intervals very feebly convex.

Ventral side sparsely clothed with scales and fine recumbent setae. Abdominal segments moderately densely punctured. First abdominal suture strongly curved at middle. Hind tibiae of ♀, with two fixed spurs; spines of distal comb of hind tibiae short. Anterior tibiae straight, the outer apical angle sharply produced.

Length 4.5 mm., width 2.5 mm.

Type locality. Shrewsbury, Worcester Co., Massachusetts.

Distribution. Massachusetts, Pennsylvania, Virginia, and North Carolina.

Type material. Holotype, ♀, Shrewsbury, Mass., in the author's collection, 4 paratypes: 1 ♀, Chincoteague, Va., X-8-34, H.S. Barber, in the author's collection; 1 ♀, Delaware Co., Pa., X-19-13, Kaerber, 1 ♀, Southern Pines, N.C., IV-2-11, A. H. Manee, 1 ♀, Southern Pines, N.C., IV-20-11, A. H. Manee in the United States National Museum. Length of paratypes 4.0–4.5 mm., width 2.1–2.3 mm.

This species can be easily separated from all other species by the sharply produced outer apical angle of the anterior tibiae and the short spines in the distal comb of the posterior tibiae. The holotype was taken by sifting woodland litter.

***Cercopeus strigicollis* n. sp.**

Figure 3

Female. Elongate-oval, convex; dark reddish brown; densely clothed with dark brown, and gray scales and erect recurved setae; the gray scales condensed on the sides of the elytra and prothorax; the erect setae in a single row on each elytral interval; no definite color pattern evident.

Rostrum short, broad, slightly more than one-half as long as the prothorax; dorsal edge, in profile, convex, nasal plate not obliquely set off. Head prominently strigose. Eyes convex, oval, not prominent.

Prothorax one-fifth wider than long, the sides evenly rounded from base to apex; pronotum longitudinally strigose, the punctures nearly effaced; middle of pronotum distinctly tumid. Scutellum very small but visible.

Elytra elongate-oval, one-third longer than wide; the sides rounded from base to apex; striae strongly impressed, striae punctures rectangular; intervals flat.

Ventral side sparsely clothed with gray scales and fine suberect setae. Abdominal segments smooth, very sparsely irregularly punctured. First abdominal suture very feebly arched. Hind

tibiae of ♀ with two fixed spurs. Anterior tibiae straight; the outer apical angle not produced but with a spine some distance above the apex.

Length 4.25 mm., width 2.25 mm.

Male. Unknown.

Type locality. Marion, Marion County, South Carolina.

Distribution. South Carolina, Georgia and Alabama.

Type material. Holotype, ♀, Marion, S.C., II-12-35, in the author's collection; 5 paratypes: 2 ♀, Experiment, Ga., II-25-36, T. Bissell, in the author's collection; 2 ♀, Florence, S.C., II-13-39, 1 ♀, Clemson College, S.C., III-26-33, J. A. Berley, in the United States National Museum. Several examples have been seen from Alabama, but are not included as a part of the type series. Length of paratypes 4.5-4.7 mm., width 2.4-2.6 mm. The holotype was found in woodland litter. The paratypes from Florence, S.C. were in woods trash. The examples from Experiment, Ga. were in dead leaves.

This species is nearest *C. clispus* n. sp. from which it differs in larger size, presence of the spine some distance from the outer apical angle of the anterior tibiae, the indistinct color pattern and the more finely strigose pronotum. It differs from *C. chrysorrhoeus* (Say) in the strigose, slightly tumid pronotum and indistinct color pattern.

***Cercopeus clispus* n. sp.**

Figure 4

Female. Elongate-oval, convex; dark reddish brown; densely clothed with gray and dark brown scales and erect setae; the gray scales scattered on pronotum and in an oblique band on the elytra from the humeri to the declivity; the erect setae on the elytral intervals in a single row.

Rostrum short, broad, about one-half as long as prothorax, dorsal edge, in profile, arcuate from base to apex. Head strigose. Eyes oval, not at all prominent.

Prothorax as long as wide, sides feebly rounded, almost parallel except at base and apex; pronotum very coarsely, deeply strigose, the strigae not longitudinal; pronotum without a tumidity. Scutellum not visible.

Elytra oval, more than one-third longer than wide, the sides rounded from base to apex; striae very feebly impressed, stria punctures deep, rounded, and very small; intervals flat.

Ventral side with the thoracic sterna densely clothed with broad gray scales, sparsely clothed with fine recumbent setae. Abdominal segments smooth, convex, very sparsely and coarsely punctured. First abdominal suture feebly arcuate at the middle. Hind tibiae of ♀ with two fixed spurs at apex. Anterior tibiae straight; not sharply expanded at the outer apical angle, without a distinct spine on the outer edge some distance from the apex.

Length 3.3 mm., width 1.6 mm.

Male. Unknown.

Type locality. Ozark, Franklin County, Arkansas.

Distribution. Arkansas.

Type material. Holotype, ♀, Ozark, Ark., II-20-50, in the author's collection; 5 paratypes: 2 ♀, Johnson Co., Ark., II-26-48, in the author's collection; 3 ♀, Johnson Co., Ark., in the Entomological Collection, University of Arkansas, Fayetteville. Length of paratypes 3.3-3.5 mm., width 1.6-1.7 mm.

This species is related to *C. strigicollis* n. sp. but may be easily separated from it by the much coarser pronotal striae, the absence of the spine on the outer edge at some distance from the outer apical angle, and smaller size. The type was found in woodland litter. Those from Johnson, Co., Ark. were all from orchard trash.

***Cercopeus simius* n. sp.**

Figures 6 and 14

Female. Oval, convex; reddish brown; densely clothed with pale brown scales and erect, slightly recurved setae, the latter in a single row on each elytral interval.

Rostrum short, moderately broad, three-fifths as long as prothorax; dorsal edge, in profile, deeply concave between eyes and insertion of the antennae; a prominent tumidity between the

antennal insertion; apex of rostrum swollen, wider than middle. Head strigose, with a prominent tumidity on vertex. Eyes round, convex and placed more dorsally than usual.

Prothorax scarcely wider than long, the sides evenly rounded from base to apex; pronotum coarsely, closely, deeply punctured. Scutellum not visible.

Elytra oval, sides rounded from base to apex, nearly one-third longer than wide; striae deeply impressed, stria punctures small rounded and deep; intervals flat.

Ventral side very sparsely clothed with scales and fine recurved setae. Abdominal segments very smooth, very sparsely punctured; first abdominal segment with a concave depression at middle of apical margin. First abdominal suture strongly arcuate. Hind tibiae of ♀ with two fixed spurs. Anterior tibiae straight not expanded at outer apical angle, with a prominent spine some distance from apex.

Length 3.2 mm., width 1.7 mm.

Male. Unknown.

Type locality. Stone Creek, Lee Co., Virginia.

Distribution. Lee Co., Va.

Type material. Holotype, ♀, Stone Creek, Lee Co., Va., VII-31, Hubbard & Schwarz, in the United States National Museum.

Easily separated from all the other species by the peculiar characters of the rostrum, which are very prominent. The placement of the eyes is also rather peculiar.

***Cercopeus chrysorrhoeus* (Say)**

Figures 7, 13, 16 and 17

Peritelus chrysorrhoeus Say 1831, p. 13. Boheman in Schöhherr 1834, p. 517. LeConte 1857, I, p. 274.

Cercopeus chrysorrhoeus Schönherr 1843, I, p. 155. (err.)

Cercopeus chrysorrhoeus Blatchley & Leng 1916, p. 113. (err.)

Female. Oval, convex; reddish brown; densely covered with pale, and dark brown scales and inclined setae; the pale brown scales condensed in a line on the sides of the pronotum and in an oblique line on the elytra from the base to the declivity; the setae on the elytra arranged in a single row on each elytral interval.

Rostrum short, broad, two-thirds as long as prothorax; dorsal edge, in profile, evenly arcuate from eyes to apex. Head strigose, a feeble transverse depression above the eyes. Eyes moderately convex, elliptical, not very prominent.

Prothorax about as long as wide, the sides rounded from base to apex; pronotum coarsely, closely punctured; middle of pronotum not tumid. Scutellum not visible.

Elytra oval, almost one-third longer than wide; the sides rounded from base to apex; striae moderately impressed, the stria punctures very small, deep, often obscured by scales; intervals flat.

Ventral side sparsely clothed with gray scales and sub-erect setae. The scales nearly absent from the abdominal segments which are smooth and shining, feebly convex, sparsely punctured. First abdominal suture arcuate at middle. Hind tibiae of ♀, with two fixed spurs at the apex. Anterior tibiae straight, the outer edge with a spine some distance from the outer apical angle, the latter not produced outward.

Length 3.6 mm., width 1.75 mm.

Male. Unknown.

Type locality. Pennsylvania. Type destroyed.

Neotype locality. Rhododendron Hollow, Clear Creek, Goodhope, Twp., Hocking Co., Ohio.

Distribution. Massachusetts to Ohio, south to South Carolina, Alabama and Texas.

Neotype material. Neoholotype, ♀, Clear Creek, Hocking Co., Ohio, III-24-53, E. L. Sleeper, in the author's collection, 3 neoparatypes: 1 ♀, Clear Creek, Hocking Co., II-21-53, E. L. Sleeper, 4 ♀, same locality, IV-2-55, E. L. S., 1 ♀, Pittsfield, Mass., 1 ♀, Buckhannon, W. Va., all in the author's collection.

This species can be separated from the other species by the non-strigose, non-tumid pronotum and the presence of the spine on the outer edge of the anterior tibiae above the outer apical angle.

All examples were taken by sifting in predominantly Oak woods.

***Cercopeus chisaius* n. sp.**

Figures 8 and 18

Female. Oval, convex; reddish brown; densely clothed with gray and dark brown scales and short erect setae, the elytra with an oblique band of dark brown scales from the base to the declivity; the setae in a single row on each interval.

Rostrum short, broad, more than one-half as long as prothorax, dorsal edge, in profile, arcuate from eyes to nasal plate, the latter very oblique. Head coarsely, closely punctured. Eyes very strongly convex, rounded, very prominent.

Prothorax a little wider than long, the side arcuate from base to apex; pronotum very finely, closely, deeply punctured, the intervals between the punctures raised, giving the surface a granular appearance, not tumid at middle. Scutellum not visible.

Elytra oval, one-fifth longer than wide, the sides strongly rounded from base to apex; striae feebly impressed, stria punctures very small, deep and round; intervals flat.

Ventral side with the thoracic sterna densely clothed with opaque scales. Abdominal segments feebly convex, shining, very sparsely, finely punctured, very sparsely clothed with fine recumbent setae. Hind tibiae of ♀, with two fixed spines at apex. The anterior tibiae straight, not expanded at outer apical angle, without trace of a spine some distance above the apex on the outer edge. Eighth sternite of ♀ narrowed at apex, truncated (fig. 18).

Length 2.6 mm., width 1.4 mm.

Male. Unknown.

Type locality. West Vienna, Illinois.

Distribution. Illinois, Iowa, Missouri and Arkansas.

Type material. Holotype, ♀, West Vienna, Ill., XII-30-32, in the author's collection; 8 paratypes: 1 ♀, West Vienna, Ill., III-30-32, 2 ♀, Homer, Ill., III-30-07, Hart & Hood, in the author's collection; 4 ♀, Homer, Ill., III-30-07, Hart & Hood, in the United States National Museum; 1 ♀, "Ark." in the Entomological Collection of the Illinois State Natural History Survey. Other examples have been seen from Illinois, Iowa, Missouri and Arkansas, but are not a part of the type series. Length of paratypes 2.3-2.8 mm., width 1.3-1.7 mm.

This species is related to *C. confusor* n. sp. as is shown by the characters of the 8th sternite of the ♀ and the anterior tibiae, but may be separated from it by the smaller size, and finer denser pronotal punctures. From *chrysorrhoeus* it differs in the smaller size, finer pronotal punctures, narrower, non-emarginate 8th sternite of ♀ and the absence of the spine on the outer edge of the anterior tibiae above the apical angle. The holotype was taken by sifting in soil cover near the edge of a woods.

***Cercopeus confusor* n. sp.**

Figures 9 and 19

Female. Oval, convex; reddish brown; densely clothed with gray, medium brown and dark brown scales, and erect slightly recurved setae; the gray and medium brown scales in a discal patch on the elytra, the erect setae in a single row on each interval.

Rostrum short, broad, slightly more than one-half the length of the prothorax; dorsal edge, in profile, strongly arcuate from eye to nasal plate which is strongly oblique. Head coarsely, deeply, closely punctured. Eyes elliptical, strongly convex and prominent.

Prothorax nearly as long as broad; the sides rounded from base to apex; pronotum closely, coarsely and deeply punctured; not tumid at middle. Scutellum not visible.

Elytra oval, one-fourth longer than wide; the sides rounded from base to apex; striae feebly impressed, stria punctures small, round and deep; intervals flat.

Ventral side with the thoracic sterna moderately clothed with gray scales and scattered recumbent setae. Abdominal segments smooth feebly convex, very sparsely, finely punctured, sparsely clothed with fine recumbent setae. First abdominal suture moderately arched at middle. Hind tibiae of ♀ with two fixed spurs at apex. Anterior tibiae straight, not expanded at the outer apical angle and without a single spine some distance from the apex. Apex of 8th sterna of ♀ broadly rounded (fig. 19).

Length 3.2 mm., width 1.7 mm.

Male. Unknown.

Type locality. Roosevelt Lake, Nile Twp., Scioto Co., Ohio.

Distribution. Known only from the type locality.

Type material. Holotype, ♀, Roosevelt Lake, Scioto Co., Ohio, XII-30-53, E. L. Sleeper, in the author's collection; 2 paratypes: 1 ♀, same data as holotype, in the author's collection; 1 ♀, same locality and date as holotype, R. E. Woodruff, in the R. E. Woodruff Collection. All examples were taken by sifting woodland litter in a high, dry oak-hickory woods.

This species is near *C. chisaius* n. sp. and maybe separated by the characters mentioned in the discussion following the description of that species.

***Pseudocercopeus* n. gen.**

Rostrum longer and slightly narrower than the head, straight; apex of the rostrum without indication of a nasal plate or limiting ridge. Prementum not emarginate on apical margin, labial palpi only visible. Scrobes superior, short, deep and convergent above. Antennal scape attaining the apical margin of the prothorax. Funicle 7-segmented, the first two elongate, the first segment more robust, the third segment longer than broad, 4-7 moniliform. Club elongate-oval. Eyes rounded, convex, not surrounded by an orbital groove. Prothorax wider than long, the base and apex truncate; ocular lobes absent. Scutellum not visible. Elytra elongate; humeri effaced; sides arcuate. Ventral side with the metaepisterna concealed, the intercoxal lobe of the first abdominal segment broad and truncated. Second segment short, a little longer than the third, the third and fourth subequal. First abdominal suture feebly arcuate. Femora unarmed. Anterior and middle tibiae feebly mucronate. Claws free and divergent.

Genotype. *Pseudocercopeus setosus* n. sp.

The genotype resembles an elongate *Cercopeus* but lacks the orbital groove, the nasal plate and the limiting ridge. It may be easily separated from *Cercopedius* by the characters mentioned in the key.

***Pseudocercopeus setosus* n. sp.**

Figure 15

Male. Elongate, convex; reddish brown; densely clothed with white, light, and dark brown round and slightly overlapping scales and semierect setae which on the elytra are in a single row on each elytral interval.

Rostrum short, broad, about three-fifths as long as prothorax, the sides feebly convergent from the base to the apex; dorsal edge, in profile, continuous with the head, arcuate from the apical margin of the prothorax to the apex; finely, sparsely punctured, the median line without a groove. Antennal scape feebly clavate, slender; first segment of funicle elongate, robust about one-third longer than the second, the second one-half longer than the third. Club sparsely pubescent. Head very finely and sparsely punctured. Eyes round, moderately convex, and very coarsely granulate.

Prothorax about one-fifth wider than long, the sides rounded to a feeble apical constriction; pronotum convex, smooth, very sparsely and finely punctured, the scales obscuring the punctures. Scutellum absent.

Elytra elongate, nearly two-fifths longer than wide, the sides feebly arcuate behind middle to apical third, then strongly rounded to the apex; striae not impressed, striae punctures very faint; intervals flat, confusedly, minutely punctured.

Ventral side sparsely clothed with white scales and semierect setae. Abdominal segments convex, very finely, sparsely punctured; the first and second segments feebly impressed at middle. Legs densely clothed with scales and setae. Anterior tibiae straight, with numerous long, sharp spines at the apex.

Length 3.2 mm., width 1.5 mm.

Female. It differs from the male in having the first and second abdominal segments convex and not impressed. Length 3.0 mm., width 1.6 mm.

Type locality. Tempe, Arizona.

Distribution. To present, known only from the type locality.

Type material. Holotype, ♂, and allotype, ♀, Tempre, Ariz., I-31, in the author's collection.

This species resembles an elongate *Cercopeus* but may be readily separated from it by the absence of the nasal plate and limiting ridge and the absence of the orbital groove around the eyes. It may be separated from *Cercopedius* by the shorter rostrum.

***Cercopedius* n. gen.**

Rostrum rather slender, subcylindrical, the sides feebly convergent from base to apex; the apex without a nasal plate and limiting ridge. Prementum broadly emarginate on apical margin, both maxillary and labial palpi visible. Scrobes superior, short, deep and convergent above. Antennal scape slightly arcuate, attaining the apical margin of the prothorax. Funicle 7-segmented, the first two segments elongate subequal, the first segment robust, the second slender, segments 3-4 longer than broad, 5-7 moniliform. Club elongate, acuminate at tip. Eyes round, not surrounded by an orbital groove. Prothorax transverse, a little wider than long; ocular lobes absent. Scutellum not visible. Elytra oblong-oval, the sides broadly rounded from base to apex. Ventral side with the metaepisterna concealed, the intercoxal lobe of the first abdominal segment broad and truncated. Second abdominal segment longer than third and fourth united. First abdominal suture straight. Femora unarmed. Anterior and middle tibiae mucronate. Anterior tibiae straight, the outer apical angle feebly expanded. The apex of each tibiae with several spines. Claws free and divergent.

Genotype. *Cercopeus artemisiae* Pierce.

This genus can be separated from *Cercopeus* by the longer rostrum and the absence of a nasal plate and limiting ridge. From the genera lacking the nasal plate it may be separated by the characters in the key.

***Cercopedius artemisiae* (Pierce) n. comb.**

Figure 12

Cercopeus artemisiae Pierce 1910, p. 365. Blackwelder 1948, p. 46.

Lepidopus parvulus Van Dyke 1936, p. 78.

Cercopeus parvulus (Van Dyke), Blackwelder 1948, p. 46.

Elongate-oval, convex; black, with the antennae and tarsi reddish brown; densely clothed with round, feebly overlapping white and yellowish brown, finely striate, appressed scales and pale, fine, suberect setae which are widely separated and in a single row on each elytral interval.

Rostrum rather slender, subcylindrical, the sides feebly convergent from base to apex, two-thirds as long as prothorax; finely, sparsely punctured, and with a narrow median groove from base to insertion of antennae. Antennae slender, the funicle with the first segment elongate and robust, one-third longer than the second which is more slender and about one-third longer than the third, segments 3-4 elongate, longer than broad, 5-7 moniliform. Club ovate-acuminate. Head convex and with or without an interocular fovea. Eyes round, feebly convex and coarsely granulate.

Prothorax about one-fifth wider than long, the base and apex feebly constricted, the sides strongly rounded between the constrictions; pronotum convex, very finely sparsely punctured, the punctures obscured by the scales. Scutellum not visible.

Elytra elongate-oval, about two-fifths longer than broad, the sides broadly arcuate from base to apex; striae unimpressed and narrowly denuded giving an appearance of being strongly impressed, stria punctures very fine, shallow and round; intervals flat, finely punctured.

Ventral side rather densely clothed with rounded scales and suberect setae. Abdominal segments convex, finely, sparsely punctured and strongly alutaceous. First abdominal suture straight. Legs densely scaly. Anterior tibiae straight, slightly expanded at outer apical angle, apices with moderately long spines.

Length 2.7-3.5 mm., width 1.4-1.8 mm.

Type locality. Type of *artemisiae* Pierce was from Corvallis, Montana, that of *parvulus* Van Dyke was from Parma, Idaho.

Distribution. Montana, Idaho and Washington.

Material examined. *Montana*: Corvallis, V-09, R. A. Cooley, (holotype and 4 paratypes), in the United States National Museum. *Idaho*: Parma, IV-1-31, H. P. Lanchester, (holotype of *parvulus*), in the Entomological Collection, California Academy of Sciences. *Washington*: 5 ♀, 5 mi. W. College Pl., IV-17-49, G. H. Nelson, in the author's collection and G. H. Nelson Collection; 40 ♀, Pullman, IV-15-40, in the United States National Museum and the author's collection; 20 ♀, Ephrata, V-5-49, F. F. Ritz, in the United States National Museum and the author's collection. The examples from near College Pl., Wash. were beaten from sage brush. The type and paratypes were found feeding on cherry.

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